

TOBACCO INDUSTRY RESEARCH COMMITTEE
350 FIFTH AVENUE NEW YORK 1, N. Y.

No Comment

Expendable Supplies
Application For Research Grant

\$ 27,554.00
\$ 250.00
\$ 27,804.00

Other: (Laboratory telephone and overhead) Date:

This does not include salary of Principal Investigator December 15th, 1954

1. Name of Investigator: **William S. Murray, Sc.D.** continuing problem of parallel duration with the interest of the Tobacco Industry Research Committee in any phase of experimental research in relation to health, which includes the use of controlled animal material in the laboratory or in vivo or in vitro.
2. Title: **Research Associate and Administrative Director**

3. Institution: **Roscoe B. Jackson Memorial Laboratory**
& Address: **Bar Harbor, Me.**
The proposed plan will not require the acquisition of additional professional staff. The laboratory has a large construction quarters for the present with caretakers and research assistants now in training. These will be augmented by new personnel in the unskilled categories.

4. Project or Subject: **The production of genetically controlled animals and tumors for use in experimental research on tobacco in relation to health by (a) the expansion of known inbred stocks and sources of tumor supply; (b) the production of such hybrids or heterozygous types as become necessary.**
The facilities, equipment and services of the Laboratory plant, valued at \$1,000,000, are available for the project.

5. Detailed Plan of Procedure (Use reverse side if additional space is needed): (Including relation of work to other projects and other sources of supply)
The use of genetically controlled strains of animals has become an accepted principle in medical research. The employment of such controlled animal material in research projects to be initiated by, or supported by, the Tobacco Industry Research Committee has been approved as a policy by its Scientific Advisory Committee.

As a corollary of this policy, it is recognized that, if genetically "mixed" animals are to be used for some particular purpose, it will be much more satisfactory and much more adaptable to critical analysis if these heterogenous mixtures are produced in a repeatable manner by the interbreeding of known stocks.

The Jackson Laboratory has the most extensive, diversified, and complete representation of inbred mice available to medical researchers. It is therefore in a unique position to undertake the extension of existing strains, the development of new strains, or the producing of desired combinations of inter-strain hybrids. This statement applies also to the many types of tumors produced and maintained by transplantation.

Mice raised at the Jackson Laboratory have the following advantages over commercially produced animals:

1. They are obtained by expansions from carefully controlled nucleus stocks;
2. They are systematically checked for purity of strain and indications of infection;

Walter J. Bailey
Business Officer of the Institution

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3. They are carefully graded as to sex, age, and weight;
4. The colonies are supervised by trained geneticists, who have the cumulative knowledge and experience of some 20 resident scientists, trained also in other disciplines, readily available for consultation;
5. The genetic qualities of the inbred strains; their incidences of malignancies of various types; their morphological and physiological characteristics are supported by a 30 year accumulation of data. This accumulation of information is perhaps the greatest value of these animals, in that it enables the staff to advise scientists who are about to undertake specific problems on the selection of the animal material best adapted to provide a critical assay of their research.

At the present time the Laboratory is raising a total of 1,100,000 mice per year. Of these, 700,000 are used in the problems of its own staff and for the replenishment of the breeding colonies of the 60 inbred strains maintained and for carrying on 26 transplanted tumors. The ~~xxxx~~ remainder are observed and studied for genetic variations and are then sold to some 400 laboratories and hospitals in 43 states and the District of Columbia. Smaller numbers are shipped to laboratories in 22 foreign countries, ~~xxxx~~ covering every continent.

During the last five years, the Laboratory has been faced with an ever-increasing demand for its excess animals. Requests for almost twice the number of animals the Laboratory is now able to produce are continuously on file.

Provision of facilities and personnel for the purpose of producing additional animals is an imperative need.

It is requested that the Tobacco Industry Research Committee consider a grant in support of the effort to meet this need, on the understanding that research projects supported by the T.I.R.C. will receive first consideration in the sale of the increased number of animals which will be made available.

The grant requested will by no means cover the whole cost of scientific personnel needed to supervise and check the genetic qualities of the animals studied, or of the overhead needed to provide the facilities for their production. It will, ~~xxxxxx~~ however, justify the Laboratory in undertaking the production of a significant number of additional animals for the purposes mentioned. It will also make an important contribution to further and more complete genetic analysis of the various inbred strains, and their hybrids, and of the tumors which they produce both naturally and by induction. This will make the material studied increasingly valuable for all types of medical research.

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6. Budget Plan:

Salaries	\$ 20,554.00 *
Expendable Supplies	7,585.00
Permanent Equipment	9,350.00
Overhead	
Other (Laboratory services and overhead)	9,829.00
Total	\$47,318.00

*This does not include salary of Principal Investigator.

7. Anticipated Duration of Work:

This is a continuing problem of parallel duration with the interest of the Tobacco Industry Research Committee in any phase of experimental research on tobacco in relation to health, which includes the use of controlled animal

8. Facilities and Staff Available:

material to be used ~~in~~ in vivo or in vitro.

The proposed plan will not require the acquisition of additional professional personnel. The laboratory is at the moment construction quarters for the proposed expansion and plans to staff these new quarters with caretakers and research assistants now in training. These will be augmented by new personnel in the unskilled categories.

The facilities, equipment and services of the Laboratory plant, valued at \$1,164,000., will be available to this effort. The present mechanized cleaning and sterilizing equipment has capacity for the proposed additional load.

None

(a) the acquisition of brain tissue from mice and sources of tumor material (b) the production of such hybrids or heterozygous lines as desired.

10. Additional Information (Including relation of work to other projects and other sources of supply):

(Including relation

of work to other projects and other sources of supply):

On the basis of past performance, this plan should make available, to research outside the Laboratory, an additional 100,000 mice per year. Tobacco Industry Research Committee has been operating as a source for its scientific study.

As a subsidiary of this plan, it is proposed that a subsidiary "mixed" mouse line be obtained for research purposes, and will be suitable for hybridization and such mice adaptable to various experiments if these heterogeneous mixtures are produced in a reproducible manner by the hybridization of known stocks.

The Jackson Laboratory has the most extensive, diversified, and complete representation of mouse strains available in medical research. It is therefore in a unique position to undertake the extension of existing strains, the development of new strains, or the production of desired combinations of inter-strain hybridization. This statement applies also to the many types of tumors produced and maintained by transplantation.

Also related to the Jackson Laboratory is the work of the Jackson Laboratory on commercially produced animals.

Signature of William S. Murray
Director of Project

1. Mice obtained by experiment from carefully controlled nucleus

Signature of Dale J. Foley
Business Officer of the Institution

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